

What is Claimed is:

- 1 1. A method for packaging a fiber optics device comprising the steps of:
 - 2 (a) preparing a fiber optics sub-assembly with a specific function that has at least a
3 fiber extending from both ends of said fiber optics sub-assembly;
 - 4 (b) inserting a first end of said sub-assembly into a housing cap and then permeating
5 a sealant into a narrow gap between said housing cap and said sub-assembly to
6 achieve their tight bonding and air-tightness;
 - 7 (c) reserving a first section of said fiber outside a second end of said sub-assembly;
 - 8 (d) stripping a protective coating of a second section of said fiber after said first
9 section of said fiber;
 - 10 (e) inserting said second end of said sub-assembly into a hole of a sleeve whose
11 aperture only allows said fiber to pass through so that said second section of said
12 fiber is surrounded entirely by said sleeve, and then permeating a sealant into a
13 narrow gap between said second section of said fiber and said sleeve hole to
14 achieve their tight bonding and air-tightness; and
 - 15 (f) surrounding said housing cap and said sleeve with a housing tube and then
16 permeating a sealant into narrow gaps between said housing tube and said
17 housing cap, and between said housing tube and said sleeve to achieve their tight
18 bonding and air-tightness.
- 1 2. The method for packaging a fiber optics device according to claim 1, wherein said
2 second section of said fiber has a length shorter than that of said sleeve so that said
3 second section of said fiber is surrounded entirely by said sleeve.

- 1 3. The method for packaging a fiber optics device according to claim 1, wherein joins
2 between said housing tube and said housing cap, and between said housing tube and
3 said sleeve are achieved by a tin soldering process.
- 1 4. The method for packaging a fiber optics device according to claim 1, wherein joins
2 between said housing tube and said housing cap, and between said housing tube and
3 said sleeve are achieved by a laser welding process.
- 1 5. The method for packaging a fiber optics device according to claim 1, wherein said
2 sleeve and said second section of said fiber are joined by a tin soldering process.
- 1 6. The method for packaging a fiber optics device according to claim 1, wherein said
2 sleeve and said second section of said fiber are joined by a glass soldering process.
- 1 7. The method for packaging a fiber optics device according to claim 1, wherein said
2 sealant is epoxy resin.
- 1 8. The method for packaging a fiber optics device according to claim 1, wherein
2 differences in terms of thermal expansion coefficients between said housing tube and
3 the fiber optics sub-assembly are less than $30 \times 10^{-6}/^{\circ}\text{C}$.
- 1 9. The method for packaging a fiber optics device according to claim 1, wherein a
2 section of said fiber optics sub-assembly joining said housing cap is made of a
3 material that is completely moisture-proof.
- 1 10. The method for packaging a fiber optics device according to claim 1, wherein said
2 housing cap and said sleeve are made of a material that is completely moisture-proof.
- 1 11. A packaging structure for a fiber optics device comprising:

2 a fiber optics sub-assembly having at least a fiber extending from both ends of said
3 fiber optics sub-assembly;
4 a housing cap surrounding a first end of said fiber optics sub-assembly;
5 a first section of said fiber extending out of a second end of said fiber optics sub-
6 assembly being reserved, and a second section of said fiber behind said first section
7 of said fiber being stripped of protecting coating;
8 a sleeve surrounding said fiber extending out of said second end of said fiber optics
9 sub-assembly with a center hole whose aperture allows only said fiber to pass
10 through, and covering said second section of said fiber entirely; and
11 a housing tube surrounding said housing cap and said sleeve.

1 12. A packaging structure for a fiber optics device comprising:

2 a fiber optics sub-assembly having at least a fiber extending from both ends of said
3 fiber optics sub-assembly;
4 a first section of said fiber extending out of said both ends of said sub-assembly
5 being reserved, and a second section of said fiber behind said first section of said
6 fiber being stripped of protecting coating;
7 two sleeves surrounding said fiber extending out of said both ends of said sub-
8 assembly respectively, each with a center hole whose aperture allows only said fiber
9 to pass through, and covering said second section of said fiber entirely; and
10 a housing tube surrounding said sleeves.

1 13. A packaging structure for a fiber optics device comprising:

2 a fiber optics sub-assembly having a first end sealed and packaged, and having at
3 least a fiber extending from a second end of said fiber optics sub-assembly;
4 a first section of said fiber extending out of said second end of said fiber optics sub-
5 assembly being reserved, and a second section of said fiber behind said first section
6 of said fiber being stripped of protecting coating;
7 a sleeve surrounding said fiber extending out of said second end of said fiber optics
8 sub-assembly with a center hole whose aperture allows only said fiber to pass
9 through, and covering said second section of said fiber entirely; and
10 a housing tube surrounding said first end of said fiber optics sub-assembly and said
11 sleeve.